

ISSUE PAPER  
MORGANTOWN PRT

I. BACKGROUND.

A. Events Leading to May 1975 Agreement.

UMTA and West Virginia University (WVU) entered into the agreement to develop the Morgantown PRT in September 1971. The basic terms of that agreement, which governed the relationships between the parties until adoption of Amendment No. 4 on May 15, 1975, were as follows:

1. UMTA agreed to build, on WVU land, a fully automated PRT system, suitable for national replication, consisting of 5 vehicles, 2 1/3 miles of double track guideway connecting three stations, and associated facilities, buildings and equipment, all designed to accommodate further expansion up to 100 vehicles and six stations.
2. WVU agreed to provide the right-of-way at no cost to the project.
3. UMTA agreed to fund WVU to carry out research and demonstration functions.
4. At the close of the research phase, upon completion of UMTA's final technical evaluation, possession of all the project facilities and equipment would vest with WVU.
5. If the system did not meet the specification at the time of testing or could not be brought up to standard within one year, the University might request removal and UMTA was obliged to remove it.

The cast of this relationship was decidedly unfavorable to the Government, principally because of the uncertainty surrounding disposition of the system at the close of testing. At the time this contract was signed, there was no firm technical specification for the system itself; the "specification" under which system performance under the UMTA-WVU contract was to be evaluated consists only of some vague performance characteristics (e.g., "operating satisfactorily in a demand-responsive as well as a scheduled move"). Moreover, part of the specification in the UMTA-WVU contract was that "operating and maintenance costs shall be reasonable and acceptable to the . . . (University) . . . ."

The September 1971 contract therefore created a situation under which the University could allow the system to be built and tested, reject it on the grounds of its not meeting the vague "specification", and force its removal after one additional year of demonstration service.

Most crucially, the 1971 contract did not deal openly with the question of system expansion. The University had consistently pressed for a six-station configuration; while the September 1971 contract does not refer explicitly to any agreement on system expansion, it does provide that the PRT system shall "begin with . . . fifteen vehicles . . ." (later reduced to five) (emphasis supplied), and clearly contemplates expansion to six stations and 100 vehicles.

As the project began to take shape, the two issues of system cost and system disposition at the close of UMTA acceptance testing became items of growing concern and scrutiny. One of Frank Herringer's first priorities upon assuming the office of Administrator in 1973 was to place a ceiling upon further expenditures for Morgantown. The TSARC approval of Phase IB in July 1973 was conditioned upon UMTA's obtaining an agreement with WVU for acceptance of the system.

Mid-1973 contract negotiations with Boeing looking toward entering into the contract for development of Phase IB were complicated by inability to obtain a WVU commitment to accept the system. Although a letter contract with Boeing was executed in September 1973, concern over system disposition on the Hill was so great that the House Appropriations Subcommittee gave guidance in its report on the FY 1975 DOT Appropriations Act that none of the funds appropriated for Morgantown were to be spent unless an agreement with the WVU were reached within 30 days. UMTA obtained relief from this provision, and entered into a final contract with Boeing in April 1974, after a difficult negotiation.

Meanwhile, UMTA and WVU were attempting to resolve their differences. The issues between UMTA and the University clustered around: (1) system reliability; (2) operating cost; (3) system expansion; and (4) ownership. The University's position was that the acceptance testing could not establish system reliability and that a one-year UMTA-funded demonstration period was necessary before the University could decide

on system acceptance; that unless the operating and maintenance costs were in the \$850,000 (in 1972 dollars) per year range the system could not be afforded; that unless the system were expanded to six stations it was unacceptable because it could not be a viable campus transportation system and the students could not equitably be assessed for its use; and finally, that the University would not accept ownership prior to the completion of the one-year test period.

Following the FY 1975 House Appropriations hearings, UMTA had commissioned an alternatives analysis to determine the best solution to the transportation problems of the Morgantown area. The study, which was released in February 1975, endorsed a five-station system as the best alternative.

Against that background, and with a projected completion date of April 1975 for the Boeing effort in Phase IB, UMTA began to negotiate in earnest for resolution of the system disposition issue. Amendment No. 4, signed by Administrator Herringer on May 15, 1975, after consultation with the Secretary, OMB and the House Appropriations Subcommittee, is the result of that negotiation. Only the House Subcommittee, however, actually reviewed the text of the proposed agreement.

B. Amendment No. 4.

Amendment No. 4 supersedes the 1971 contract in all significant respects. It provides that:

1. The University agrees to accept ownership of the system when UMTA certifies at the end of acceptance testing (now completed) that the system has met the extensive original "MPRT specifications", as modified by the less rigorous "B/U spec" appended to Amendment No. 4.
2. Ownership of the system will revert to UMTA at the end of a one-year "operating period" if the system is not "satisfactory from a mechanical and/or economic standpoint or standpoints," except that the condition subsequent is voided if there is "compliance by satisfactory operating period experience with ... [the B/U spec]" by the system. UMTA has the option, with the consent of the Board, of extending the operating period for one additional year during which it may attempt to "correct deficiencies in the system". Note that WVU has already informally agreed to several waivers of the original MPRT spec and the B/U spec in the context of accepting the system under proposed Amendment No. 5 (see Section C, following).
3. UMTA agrees to make a capital grant for 80 percent of system start-up and training costs during the one-year operating period, and for architectural and engineering costs for two additional stations. Further, UMTA agrees to approve a demonstration grant for operating and maintenance costs during the one-year period, including continued elements of testing, monitoring, and

evaluating the system. (The two grants have been approved for a total of \$4.52 million and the University has been orally so informed although the documents are still being processed and the contract language of Amendment No. 5 is still being negotiated.)

4. If the one-year operating period or the one-year extension thereof "proves that the MPRT is a viable system from the point of view of meeting the specifications and operations and maintenance cost estimates set out in ... [the B/U spec]..." and WVU has then fully accepted the ownership of the system with no further reverter, UMTA will make a capital grant to expand the system to five stations, provided that "the estimated cost of such construction is reasonable and in any case less than... \$53,800,000... in United States Dollars purchasing power as of July 1, 1974."

C. Amendment No. 5

Proceeding under the scheme set out in Amendment No. 4, UMTA has now accepted the system from Boeing, and has approved the capital and demonstration grants for the one-year operational period as agreed in Amendment No. 4. The demonstration grant is to be through the vehicle of contract Amendment No. 5 which is also the vehicle for transfer of system ownership to WVU. The University has indicated that it is willing (indeed eager) to accept ownership and has already approved those waivers of the B/U spec which were corollary to the waivers of the original MPRT spec which UMTA granted upon accepting the system from Boeing. If there are further refinements to be made

in the UMTA-WVU relationship, Amendment No. 5 would be the appropriate vehicle.

## II. ISSUES.

### A. Should UMTA attempt to renegotiate the reverter clause with WVU?

There is virtually no possibility that WVU would agree to immediate ownership of the system without the option of divestment if it is not technically and economically adequate. That has been part of the deal from the outset. Renegotiation of the concept of reverter is not realistic. As it presently reads, the reverter becomes effective if the system does not comply with the B/U spec in all respects, except as waived in Amendment No. 5. This implicit requirement of complete as opposed to substantial performance could become a problem since minor failures to comply with the specification are to be expected in a project of this magnitude. On the other hand, WVU's principal objective throughout this project has been to obtain a system that meets the actual transportation needs of the campus, and it has maintained consistently that a three-station configuration is useless as a transportation system. The capital grant for the two-station addition is dependent upon WVU's unconditional agreement to whatever waivers might be necessary to void the condition subsequent and then to UMTA's unilateral finding that the construction cost estimates are "reasonable". In other words, WVU cannot get the two stations it wants until it has agreed to waive the reverter, and it must do that before construction costs escalate beyond \$53.8 million. In this situation UMTA has

substantial negotiating leverage.

While the reverter clause is not entirely satisfactory, the provision must be viewed in the context of the 1971 contract that it superseded, which, with its impressionistic specification, gave WVU discretion to reject the system virtually at whim. Amendment No. 4 is a substantial improvement of that situation from the Government's point of view. In the totality of the circumstances (including the positive momentum of the operating period, the showpiece value to WVU of the system, and the political difficulty of demolishing the system), it seems quite unlikely that the WVU will invoke the reverter clause on the basis of minor technical defects. It is much more likely, assuming that the system is not hopelessly deficient, that the University would request another year of UMTA-funded demonstration in order to cure defects that are significant but not sufficient to justify invoking the reverter. These defects are likely to focus on the two key specifications of 96 percent system dependability and operational and maintenance costs not exceeding \$850,000 annually in 1972 dollars. In that case, the University would also have to weigh the advantages of continued demonstration against the disadvantages of increased construction costs due to further delay in building the two additional stations. As a practical matter, we would anticipate some additional capital grant funding (not anticipated to exceed \$2 - 2 1/2 million) to remedy curable defects, after system acceptance by WVU.



On balance, therefore, we do not recommend re-opening the reverter clause given the slim likelihood of success, the appearance of contract breach and the political repercussions thereof, and negotiating leverage which the Government will in any case have at the end of the one-year period.

B. Should UMTA attempt to re-open the capital grant commitment for two additional stations?

The capital grant commitment in the contract is susceptible of several interpretations. The contract says that UMTA will fund the two-station extension if the "estimated cost of such construction is reasonable and in any case less than...\$53,800,000...in...[1974 dollars]..." The language does not reveal whether the "construction" cost is intended to be inclusive or exclusive of land; nor whether UMTA anticipates funding the actual cost of the project if it exceeds the estimated cost; nor what indices will be used to arrive at an estimate in 1974 dollars. In any case, UMTA will have to determine whether the construction cost is "reasonable".

There is considerable latitude for negotiation over the cost characteristics of the two additional stations and over the level of UMTA funding. These negotiations will take place after the results of the operating demonstration have begun to be received, and against the background of any technical modifications to the system that will be required to defeat the condition subsequent. It is thus realistic to anticipate that

the resolution of issues of final system performance after the one-year operating demonstration will be subsumed into the capital grant negotiation. The ambiguity in Amendment No. 4 gives UMTA the opportunity to negotiate the best achievable final resolution when all of the facts are in. We therefore recommend against re-opening Amendment No. 4 to eliminate the Phase II capital grant ambiguity. We should note that the anticipated construction cost of the two additional stations is well below \$53.8 million in 1974 dollars.

C. Should UMTA seek control over the testing and evaluation procedures?

UMTA has in Amendment No. 5 approved a demonstration grant to WVU for \$1,280,777 "to assist it in financing the cost of demonstrating the capability of the...[system]...to successfully operate during its first year of use...." The purpose of the grant is to allow WVU to carry on the work of testing, monitoring and evaluation.

The methods used by WVU to test, monitor and evaluate the system's performance under the B/U spec will to a large degree determine the performance results reported. These reported results will be the basis on which the system will be determined to have met or failed the specification, and thus will influence heavily the relative bargaining positions of UMTA and WVU at the end of the demonstration period.

UMTA's close oversight over development of the test procedures is particularly important in light of the fact that the B/U spec requires several elements of performance that will be very difficult to achieve

or measure in the context of experimental operation of the three-station system (e.g., passenger flow; operating and maintenance cost); moreover, a finding that the system meets the specification will require judgmental distinctions between characteristic and uncharacteristic failures that UMTA needs to influence. UMTA will seek to amend the work statement for the demonstration grant to provide significant UMTA control of the testing and evaluation procedures. This, we believe, is the better strategy than re-opening the basic conditions of the reverter.

D. Summary.

While it is not ideal, Amendment No. 4 made a considerable advance over the 1971 contract. Most of the aspects of Amendment No. 4 that appear to be troublesome are very substantial ameliorations, from the Government's point of view, of conditions that existed under the 1971 agreement.

The central advantage to the Government in Amendment No. 4 is that it establishes a rational set of rules under which decisions respecting system ownership will be made. This was critical to the Government's interest because the 1971 agreement was sufficiently flaccid that the University could have rejected the system virtually at will. In exchange for that relative security, the Government agreed to constrain some of its future administrative discretion as concerns a grant to complete five stations. These actions were taken because of the

virtually universal sentiment in the Department, OMB and the Congressional Committees that achieving an agreement with WVU for the divestiture of Federal ownership of the system was of the highest importance. While it may be possible to achieve some refinements to Amendment No. 4 as we transfer ownership under Amendment No. 5, the posture of this project requires that we not pursue that objective to the point of forcing an impasse on the transfer itself.

The most significant result of Amendment No. 4 is that after the one-year operating demonstration, assuming that system performance is not utterly unacceptable, all of the inertia will be on the side of the University's retaining ownership. That critical shift in the balance of the negotiations can be expected to have an impact on every element that will be discussed at that time.

### III. RECOMMENDATION.

UMTA should treat Amendment No. 4 as an accomplished fact. In the context of Amendment No. 5, UMTA should seek to exert greater control over the testing and evaluation process during the one-year operating period through the statement of work. Further, this memorandum and the discussion of it should be viewed as sufficient to clarify our internal record on this matter, making unnecessary the need for further extensive staff-level recapitulation.

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